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10/792,298	03/04/2004	Takahito Miyamoto	FEC 118	3151

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EXAMINER	
RODEE, CHRISTOPHER D	
ART UNIT	**PAPER NUMBER**
1756	

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/792,298	MIYAMOTO, TAKAHITO	
	Examiner	Art Unit	
	Christopher RoDee	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-11* is/are pending in the application.

4a) Of the above claim(s) *3 and 8-11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Newly submitted claims 3 and 8-11 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

The invention of claims 3 and 8-11 and the invention of claims 1 and 4-7 are related as process and apparatus for its practice, respectively. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process, such as when the apparatus does not meet the process conditions of formula (1) as specified in claim 3. The Examiner recognizes that the same formula is present in apparatus claim 1. However, as stated in MPEP 2114, "a claim containing a 'recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus' if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)." It is apparent from this passage that process conditions in an apparatus claim provide no limitation to the apparatus itself. Thus in claim 1, the process conditions do not provide a positive limitation to the apparatus. The apparatus of claim 1 is not limited to the specified process conditions to function. Consequently, the apparatus can be used in other processes.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution

on the merits. Accordingly, claims 3 and 8-11 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Response to Amendment

The amendment filed 28 March 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the addition of item **13** to Figure 1 and the corresponding text concerning this item on specification page 6. The specification and drawings as originally filed do not disclose rotation means **13** as part of the apparatus, do not disclose the position of this means in the location shown in Figure 1, do not disclose the means as cylindrical as shown, and do not disclose the means as external to the cylindrical photoreceptor. Although such means may be common in the art, there is nothing in the disclosure *of this application* to show that the means is as depicted in the Figure or as described in the specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

Drawings

The replacement drawing was received on 28 March 2006. These drawings are not approved for the reasons given above in the section 132 new matter objection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 4-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The instant claims have been amended to require "a means for rotating the cylindrical electrophotographic photoreceptor at predetermined peripheral speed V in mm/sec." Applicants have inserted this limitation in an attempt to overcome the section 112, second paragraph, rejection as presented in the last Office action (see response, first page of Remarks). Although such means may be common in the art, there is nothing in the disclosure *of this application* to show that there is a separate means for rotating the photoreceptor at the specified speed. Further, because this new claim language invokes the sixth paragraph of section 112, the means disclosed in the specification and their equivalents are limiting of the claims. The only apparent disclosure of the means for rotating are as given in the amended Figure, which contains new matter for this feature for the reasons given above.

Claim 1 remains rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The pending claims recite an apparatus containing a photoreceptor. The photoreceptor is present in an apparatus having a resolution of at least 1200 dpi. The photoreceptor in each claim has a charge generation layer and a charge transport layer. The charge transport layer has a thickness of greater than 25 μm. The photoreceptor is also defined in relationship (1) by

the product of the peripheral speed of the photoreceptor (V), the contact angle of the photoreceptor to pure water (A), and the thickness of the photoreceptor (T).

An apparatus is defined by its structural components (see MPEP 2114 & 2115). As noted in the last Office action, the claims attempt to define the apparatus based on the manner in which the photoreceptor is used, specifically by a relationship involving rotation of the photoreceptor. The movement of the photoreceptor does not provide a definite limitation to the claimed relationship because the peripheral speed of rotation can be arbitrarily chosen to any value desired for claim 1. Because any value can be used for the peripheral speed, the artisan theoretically could find photoreceptors with set combinations of A and T that both fall in and outside the scope of the claims depending on how fast the photoreceptor is rotated.

Applicants have corrected a math error in the last Office action concerning how Kawamura would be applicable to the claimed formula. The Examiner appreciates applicants' attention to this detail. However, the basis of the rejection remains true. Any peripheral rotation speed below 116.3 mm/sec would permit the photoreceptor to fall within the scope of the claims. Any peripheral speed at or above this value would not permit the photoreceptor to fall within the scope of the claims. Thus, the same photoreceptor can fall within and outside the scope of the claims depending on what speed the artisan later decides to rotate it. The claims are indefinite because they are dependent on an arbitrary manipulative step.

The rejection is still seen as proper and is maintained.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 4-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawamura *et al.* in US Patent 6,548,216.

In the last Office action that Examiner applied Kawamura based on its disclosure of a photoreceptor in Example 1 having a charge generation layer and a charge transport layer coated on an aluminum drum. The charge transport layer has a thickness of 30 μm ± 1 μm. The reference discloses a contact angle with pure water of 85° to 140 ° (col. 20, l. 16-36). Figure 6 shows the reference's photoreceptor in an image forming apparatus with processing components surrounding the photoreceptor (col. 30, l. 7 - col. 31, l. 12). The reference is specifically concerned with obtaining resolution of 1200 dpi and 2400 dpi (col. 2, l. 53-62).

As noted above, the peripheral speed limitation is a process limitation on the apparatus. This process limitation (or manner of using the apparatus) does not provide a patentable limitation on the apparatus. A "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus". See *Masham*. The process limitation (i.e., peripheral speed) does not differentiate the claimed apparatus from that of Kawamura.

Applicants traverse the rejection because the "speed" is not mentioned in the reference. As discussed above, the speed is a process limitation that does not provide a patentable limitation to the claims. Applicants are claiming the apparatus not the manner in which it is used. An apparatus is defined by its structural components and each structural component is disclosed by the reference for the reasons given above and in the last Office action. The fact that Kawamura does not disclose the speed of rotation of the photoreceptor does not remove Kawamura as a competent reference because the speed is not a patentable limitation.

Applicants also traverse the rejection because since Kawamura does not disclose a value for V or range of values for V it cannot possible disclose a combination of values for V, A,

and T. Again, this is not found persuasive because the speed of rotation is a process limitation that is not patentable in an apparatus claim. Applicants' other remarks are directed to the non-elected claims.

For new dependent claims 4-7, Kawamura discloses an apparatus as claimed. Placing the value 114 mm/sec in V in equation (1) gives:

$$V^{0.1} \times A \times T^{0.2} < 270$$

$$114^{0.1} \times A \times 30^{0.2} < 270$$

$$1.61 \times A \times 1.97 < 270$$

$$A < 85.1°$$

Placing 45 mm/sec in V in equation (1) gives:

$$V^{0.1} \times A \times T^{0.2} < 270$$

$$45^{0.1} \times A \times 30^{0.2} < 270$$

$$1.46 \times A \times 1.97 < 270$$

$$A < 93.9°$$

The other rotational speeds are between these two values. A is the water contact angle of the photoreceptor surface. Kawamura discloses a contact angle with pure water of 85° to 140 ° (col. 20, l. 16-36). Thus, the values of the instant claims are disclosed by the reference.

Because Kawamura's photoreceptor has the requisite layers and charge transport layer thickness, as well as a water contact angle disclosed in the specification as effective (for example, see Tables 9 and 10 on page 13) and a resolution at the same dpi as the instant specification and claims, it appears that Kawamura identically discloses imaging apparatuses within the scope of the claims. Furthermore, given the indefiniteness of the instant claims with respect to the process limitation (i.e., peripheral speed) the claims appear to include the photoreceptors of Kawamura for all specified speeds.

The rejection is still seen as proper and is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamura *et al.* in US Patent 6,548,216.

In the event the disclosure of a water contact angle of 85° to 140 ° is not sufficient to anticipate each of the newly submitted dependent claims, the Examiner also references Table 2 where various water contact angles are disclosed. These values range from 92° to 101°.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to select water contact angles within the range disclosed, 85° to 140°, preferably within those exemplified in Table 2 because the reference teaches water contact angles as a result effecting variable on image production and the artisan would select values from the disclosed range to obtain the results of the invention.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher RoDee whose telephone number is 571-272-1388. The examiner can normally be reached on most weekdays from 6:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cdr
9 May 2006

CHRISTOPHER RODEE
PRIMARY EXAMINER